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Substitute for form 1449A/PTO				Application Number	10/040,963
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Filing Date	1/5/02
(use as many sheets as necessary)				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	V. Siek
Sheet	1	of	1	Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS					
Examiner's Initials	Cite No. <sup>1</sup>	U.S. Patent Document Number	Kind Code <sup>2</sup> (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
VS	1.	2002/0182 844	A1	12-05-2002	Igarashi et al.
	2.	2003/0053 399	A1	01-02-2003	Igarashi et al.
	3.	5,663,891		09-02-1997	Bamji et al.
	4.	5,757,089		05-26-1998	Ishizuka
	5.	5,889,677		03-30-1999	Yasuda et al.
	6.	6,128,767		10-03-2000	Chapman
	7.	6,226,560	B1	05-01-2001	Hama et al.
	8.	6,519,751	B2	02-11-2003	Sriram et al.
VS	9.	6,543,043	B1	04-01-2003	Wang et al.

NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
VS	10.	Hu, J. et al., A Timing-Constrained Algorithm for Simultaneous Global Routing of Multiple Nets, IEEE/ACM International Conference on Computer Aided Design. ICCAD – 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000, pp.99-103.	
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Examiner Signature	VINCENT SIEK	Date Considered	4/19/2004
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Filing Date	1/5/02
				First Named Inventor	Steven Telg
				Group Art Unit	2825
				Examiner Name	V. Siek
Sheet	1	of	6	Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS					
Examiner* Initials	Cite No.	U.S. Patent Document Number	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
VS	1. 2001/0009 031	A1	07-19-2001	Nitta et al.	
	2. 4,593,363		06-03-1986	Burstein et al.	
	3. 5,267,176		11-30-1993	Antreich et al.	
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	5. 5,566,078		10-15-1996	Ding et al.	
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	8. 5,637,920		06-10-1997	Loo	
	9. 5,640,327		06-17-1997	Ting	
	10. 5,784,289		07-28-1998	Wang	
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	12. 5,838,583		11-1998	Varadarajan et al.	
	13. 5,980,093		11-09-1999	Jones et al.	
	14. 6,150,193		11-21-2000	Glenn	
	15. 6,209,123	B1	03-27-2001	Maziasz et al.	
	16. 6,219,832	B1	04-17-2001	Buzbee	
	17. 6,249,902	B1	06-19-2001	Igusa et al.	
	18. 6,253,363	B1	06-26-2001	Gasanov et al.	
	19. 6,295,634	B1	09-25-2001	Matsumoto	
	20. 6,307,256		10-23-2001	Chiang et al.	
VS	21. 6,316,838	B1	11-13-2001	Ozawa et al.	

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Sheet	2	of	6	Filing Date	1/5/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	V. Siek
				Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS					
VS	22.	6,324,675	B1	11-27-2001	Dutta et al.
	23.	6,327,693	B1	12-04-2001	Cheng et al.
	24.	6,330,707		12-11-2001	Shinomiya et al.
	25.	6,407,434	B1	06-18-2002	Rostoker et al.
	26.	6,415,422	B1	07-02-2002	Mehrotra et al.
	27.	6,442,743	B1	08-27-2002	Sarrafzadeh et al.
	28.	6,448,591	B1	09-10-2002	Juengling
	29.	6,473,891	B1	10-29-2002	Shively
	30.	6,480,991	B1	11-12-2002	Cho et al.
	31.	6,490,713	B2	12-03-2002	Matsumoto
	32.	6,546,540	B1	04-08-2003	Igarashi et al.
VS	33.	6,557,145	B2	04-29-2003	Boyle et al.
	34.	6,567,967	B2	05-20-2003	Greidinger et al.

FOREIGN PATENT DOCUMENTS						
Examiner's Initials	Cite No. <sup>1</sup>	Foreign Patent Document Office <sup>2</sup> Number <sup>4</sup>		Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
VS	35.	JP 411296560		A 10-29-1999	Matsumoto et al.	with English translation of Abstract;
VS	36.	JP 2000-82743		03-21-2000	Igarashi et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.

Examiner Signature	VUTHE SIEK	Date Considered	4/19/2004
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				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	V. Siek
				Attorney Docket Number	SPLX.P0023

FOREIGN PATENT DOCUMENTS						
✓	37.	JP	H03-173471	07-26-1991	Tawada et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
✓	38.	JP	H05-243379	09-21-1993	Masako Kuboto	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
✓	39.	JP	H05-102305	04-23-1993	Akihiro Sato	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
✓	40.	JP	H07-86407	03-31-1995	Shinpei Miura	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
✓	41.	JP	H09-162279	06-20-1997	Masaaki Yoshida	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓

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				Filing Date	1/5/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	V. Siek
Sheet	4	of	6	Attorney Docket Number	SPLX.P0023

## NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>0</sup>
VS	42.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	
	43.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp. 956-931.	
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	45.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.	
	46.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35.	
	47.	Cheng, K., Steiner Problem in Octilinear Routing Model, a Thesis Submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.	
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	49.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, iss. 3A, pp. 929-933.	
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	52.	Enbody, R. et al., Near-Optimal n-Layer Channel Routing, 23 <sup>rd</sup> Design Automation Conference, 1986, pp. 708-714.	
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Examiner Signature	VUTHE SEIK	Date Considered	4/19/2004
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## NON PATENT LITERATURE DOCUMENTS

VS	56.	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing, 30 <sup>th</sup> ACM/IEEE Design Automation Conference, 1993, pp. 590-595.	
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	58.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathematical Systems Theory, 1987, pp. 189-203.	
	59.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989, pp. 585-597.	
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VS	69.	Tseng, H., Timing and Crosstalk Driven Area Routing, pp. 378-381.	

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**NON PATENT LITERATURE DOCUMENTS**

VS	70.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 <sup>th</sup> ACM/IEEE Automation Conference, 1991, pp. 49-53.	
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	75.	Zhou, H. et al., Global Routing with Crosstalk Constraints, Department of Computer Sciences, University of Texas, 1998, pp. 374-377.	
VS	76.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.	

Examiner Signature	VUTHE SIEK	Date Considered	4/19/2004
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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number(optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449A/PTO		Application Number	10/040,963		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Filing Date	1/5/02		
(use as many sheets as necessary)		First Named Inventor	Steven Teig		
		Group Art Unit	2825		
		Examiner Name	Vuthe Sick		
Sheet	1	of	1	Attorney Docket Number	SPLX.P0023

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
/S	1.	Kastner R et al.: "Predictable Routing" IEEE/ACM International Conference on Computer Aided Design, ICCAD - 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA, USA, 5-9 Nov. 2000. Pages 110-113.	
/S	2.	Jiang Hu et al.: "A Timing-Constrained algorithm for Simultaneous Global Routing of Multiple Nets" IEEE/ACM International Conference on Computer Aided Design, ICCAD - 2000. IEEE/ACM Digest of Technical Papers (CAT. NO.00CH37140), Proceedings of International Conference on Computer Aided Design (ICCAD), San Jose, CA USA, 5-9 Nov. 2000. Pages 99-103.	

Examiner Signature	VUTHE SICK	Date Considered	4/19/2004
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Substitute for form 1449A/PTO				Application Number	10/040,963
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	1/5/02
(use as many sheets as necessary)				First Named Inventor	Steven Teig
				Group Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No	U.S. Patent Document Number	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Data
V/S	1.	2003/0101428 S/N 10/040,915	01-05-2002	Steven Teig et al.	Previously specified
	2.	2003/0043827 S/N 10/040,953	01-05-2002	Steven Teig et al.	Previously specified
	3.	2003/0023943 S/N 10/040,954	01-05-2002	Steven Teig et al.	Previously specified
	4.	2002/0174412 S/N 10/041,942	01-07-2002	Steven Teig et al.	Previously specified
	5.	2003/0088844 S/N 10/041,957	01-07-2002	Steven Teig et al.	Previously specified
	6.	2002/0199165 S/N 10/046,864	01-13-2002	Steven Teig et al.	Previously specified
	7.	2003/0056187 S/N 10/047,982	01-14-2002	Steven Teig et al.	Previously specified
	8.	2002/0073390 S/N 09/737,210	12-13-2000	Steven Teig et al.	Previously specified
	9.	2002/0124231 S/N 09/739,580	12-15-2000	Steven Teig et al.	Previously specified
	10.	2003/0121015 S/N 09/745,067	12-19-2000	Steven Teig et al.	Previously specified
	11.	2002/0166105 S/N 10/040,948	01-05-2002	Steven Teig et al.	Previously Specified
	12.	2003/0088841 S/N 10/329,241	12-23-2002	Steven Teig et al.	Previously specified
V/S	13.	2003/0088845 S/N 10/047,978	01-13-2002	Steven Teig et al.	Continuation of the parent application (2003/0079193) of the present application.

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Substitute for form 1449A/PTO				Application Number	10/040,963
				Filing Date	1/5/02
				First Named Inventor	Steven Teig
				Group Art Unit	
				Examiner Name	
Sheet	1	of	1	Attorney Docket Number	SPLX.P0023

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document Number (if known)	Kind Code (if known)	Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Related Application Data
VS	1.	2003/0079193		12/07/2001	Steven Teig et al.	Parent application; present application is a continuation of 2003/0079193
	2.	2003/0018947		12/07/2001	Steven Teig et al.	Application filed on the same day as the parent application 2003/0079193, with the same specification as the present application except for summary and abstract
	3.	2002/0147958		10/19/2001	Steven Teig et al.	Parent application per the preliminary amendment dated 2/19/03
	4.	2003/0063614		01/04/2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract
	5.	2003/0064559		01/04/2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract
	6.	2003/0063568		01/04/2002	Steven Teig et al.	Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract
	7.	2003/0101428		01/05/2002	Steven Teig et al.	Continuation of 2003/0079193
	8.	2002/0166105		01/05/2002	Steven Teig et al.	Continuation of 2003/0079193
	9.	2003/0043827		01/05/2002	Steven Teig et al.	Continuation of 2003/0079193
	10.	2003/0023943		01/05/2002	Steven Teig et al.	Continuation of 2003/0079193
	11.	2002/0174412		01/07/2002	Steven Teig et al.	Continuation of 2003/0079193
	12.	2003/0088844		01/07/2002	Steven Teig et al.	Continuation of 2003/0079193
	13.	2002/0199165		01/13/2002	Steven Teig et al.	Continuation of 2003/0079193
	14.	2003/0066043		01/13/2002	Steven Teig et al.	Continuation of 2003/0088844 per preliminary amendment
VS	15.	2003/0115566		01/13/2002	Steven Teig	Continuation of 2003/0088844 per preliminary amendment

Examiner Signature	VITHE SIEK	Date Considered	4/19/2004
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Substitute for form 1449A/PTO				Application Number	10/040,963
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date	1/5/02
(use as many sheets as necessary)				First Named Inventor	Steven Teig
				Group Art Unit	
				Examiner Name	
Sheet	2	of	2	Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS				
VS	16.	2003/0056187	01/14/2002	Steven Teig et al. Another continuation of 2003/0079193
	17.	2003/0066044	01/13/2002	Steven Teig et al. Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract
	18.	2003/0066045	01/13/2002	Steven Teig et al. Application with some of the same parent provisional applications and with the same specification as the present application except for summary and abstract
	19.	2002/0133798	12/06/2000	Steven Teig et al. Application regarding related placement technology
	20.	2002/0100007	12/06/2000	Steven Teig et al. Application regarding related placement technology
	21.	2002/0073390	12/13/2000	Steven Teig et al. Application regarding related placement technology
	22.	S/N 09/737,220	12/13/2000	Steven Teig et al. Application regarding related placement technology
	23.	S/N 09/737,245	12/13/2000	Steven Teig et al. Application regarding related placement technology
	24.	S/N 09/739,460	12/15/2000	Steven Teig et al. Application regarding related placement technology
	25.	2002/0124231	12/15/2000	Steven Teig et al. Application regarding related placement technology
	26.	S/N 09/739,589	12/15/2000	Steven Teig et al. Application regarding related placement technology
	27.	S/N 09/742,171	12/19/2000	Steven Teig et al. Application regarding related placement technology
	28.	2003/0121015	12/19/2000	Steven Teig et al. Application regarding related placement technology
	29.	2002/0069397	01/13/2002	Steven Teig et al. Application regarding related placement technology
	30.	2002/0170027	02/20/2002	Steven Teig et al. Application regarding related placement technology
VS	31.	2002/0157075	02/20/2002	Steven Teig et al. Application regarding related placement technology
VS	32.	2003/0088841	12/23/2002	Steven Teig et al. Application regarding related placement technology

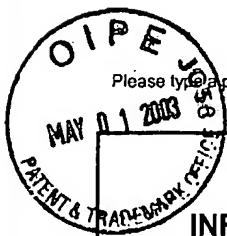
Examiner Signature	VUTHE SEIK	Date Considered	4/19/2004
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Substitute for form 1449A/PTO  
**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet	1	of	1	Application Number	10/040,963
				Filing Date	1/5/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Vuthe Siek
				Attorney Docket Number	SPLX.P0023

**U.S. PATENT DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	U.S. Patent Document Number	Kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
VS	1.	2001/0003843	A1	Scepanovic et al.	06-14-01	
	2.	4,615,011		Linsker	09-30-86	
	3.	4,673,966		Shimoyama	06-16-87	
	4.	4,782,193		Linsker	11-01-88	
	5.	4,855,929		Nakajima	08-08-89	
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	11.	5,532,934		Rostoker	07-02-96	
	12.	5,578,840		Scepanovic	11-26-96	
	13.	5,633,479		Hirano	05-27-97	
	14.	5,634,093		Ashida et al.	05-27-97	
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	17.	5,723,908		Fuchida et al.	03-03-98	
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	19.	5,757,656		Hershberger et al.	05-26-98	
	20.	5,777,360		Rostoker et al.	07-07-98	
	21.	5,811,863		Rostoker et al.	09-22-98	
	22.	5,822,214		Rostoker et al.	10-13-98	
	23.	5,859,449		Kobayashi et al.	01-12-99	
VS	24.	5,898,597		Scepanovic et al.	04-27-99	
	25.	5,914,887		Scepanovic et al.	06-22-99	

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Examiner Signature	VS VUTHE SIEK	Date Considered	4/19/2004
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO				Application Number	10/040,963
				Filing Date	1/5/02
				First Named Inventor	Steven Teig
				Group Art Unit	2825
				Examiner Name	Vuthe Siek
Sheet	2	of	2	Attorney Docket Number	SPLX.P0023

U.S. PATENT DOCUMENTS					
✓	26.	5,973,376		Rostoker et al.	10-26-99
	27.	6,035,108		Kikuchi	03-07-00
	28.	6,058,254		Scepanovic et al.	05-02-00
	29.	6,067,409		Scepanovic et al.	05-23-00
	30.	6,068,662		Scepanovic et al.	05-30-00
	31.	6,123,736		Pavsic et al.	09-26-00
	32.	6,134,702		Scepanovic et al.	10-17-00
	33.	6,155,725		Scepanovic et al.	12-05-00
	34.	6,175,950	B1	Scepanovic	01-16-01
	35.	6,216,252	B1	Dangelo et al.	04-10-01
	36.	6,230,306	B1	Raspopovic et al.	05-08-01
	37.	6,247,167	B1	Raspopovic et al.	06-12-01
	38.	6,260,179	B1	Ohsawa et al.	07-10-01
	39.	6,262,487	B1	Igarashi et al.	07-17-01
	40.	6,289,495	B1	Raspopovic	09-11-01
	41.	6,301,686	B1	Kikuchi et al.	10-09-01
	42.	6,327,694	B1	Kanazawa	12-04-01
	43.	6,385,758	B1	Kikuchi et al.	05-07-02
	44.	6,401,234	B1	Alpert et al.	06-04-02
	45.	6,405,358	B1	Nuber	06-11-02
	46.	6,412,097	B1	Kikuchi et al.	06-25-02
	47.	6,412,102	B1	Andreev et al.	06-25-02
	48.	6,436,804	B2	Igarashi et al.	08-20-02
	49.	6,446,245	B1	Xing et al.	09-03-02
	50.	6,463,575	B1	Takahashi	10-08-02
	51.	6,516,455	B1	Teig et al.	02-04-03
✓	52.	2003/0025 205	A1	Shively	02-06-03

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Examiner Signature	VUTHE SIEK	Date Considered	4/19/2004
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet	3	of	3	Attorney Docket Number	SPLX.P0023
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**FOREIGN PATENT DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code (if known) <sup>5</sup>				
V/S	53.	JP	64-15947		Ouchi	01-19-89		
V/S	54.	JP	04000677		Fujiwara et al.	01-1992		

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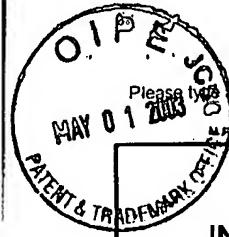
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Examiner Signature	VUTHE SIEK	Date Considered	4/19/2004
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Substitute for form 1449A/PTO  
**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

4

of

4

Application Number	10/040,963
Filing Date	1/5/02
First Named Inventor	Steven Teig
Group Art Unit	2825
Examiner Name	Vuthe Siek
Attorney Docket Number	SPLX.P0023

**NON PATENT LITERATURE DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
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